



September 8, 2021  
File No.: MWFRESNO.001C

Ms. Aldi Ramirez  
City of Fresno – PARCS Department  
1515 East Divisadero Street  
Fresno, CA 93721

**Subject: Revised Proposal for Investigation and Feasibility Study – Former Imperial Laundry  
City of Fresno, PARCS Department Property, 2165 South Elm Avenue  
Fresno, CA 93706**

Dear Ms. Ramirez:

Kleinfelder, Inc. (Kleinfelder) has prepared this proposal (Attachment A) for the City of Fresno (Client) for Site Investigation and Feasibility Study activity at the Former Imperial Laundry, located at 2165 South Elm Avenue in Fresno (Site). A letter from Central Valley Regional Water Quality Control Board (RWQCB), dated May 14, 2021, requested additional investigation to provide further assessment of the extent of soil and soil vapor impact from Stoddard solvent, and potential associated excess health risks, to the east of the former Imperial Laundry location (off Site) south of the Maxie L. Parks Community Center. The RWQCB also requested the preparation of a feasibility study to evaluate potential alternatives to address known impacts to the subsurface. The approach to the project and the scope of services (with associated fees) are based on our knowledge of Site conditions and available information. It is Kleinfelder's understanding that the RWQCB and the Department of Toxic Substances Control are exploring options for identifying responsible parties and potential funding options for potential off-site sources of groundwater impacts.

The attached proposed scope of work includes a discussion of the tasks associated with pre-field activities, field exploration of several areas of interest across the Site, laboratory testing of soil and soil gas samples, and subsequent reporting.

We thank you for the opportunity to provide this proposed scope of work. If you have any questions or comments, please contact me either by email at [jhelge@kleinfelder.com](mailto:jhelge@kleinfelder.com) or telephone at 916-366-2308.

Sincerely,

**KLEINFELDER, INC.**

William F. Schmierer, PG  
Senior Geologist

James Helge, CEM  
Principal Environmental Scientist

**Attachment:** Attachment A –Proposed Scope of Work

**ATTACHMENT A**  
**Revised Proposed Scope of Work**  
**Proposal for Investigation and Feasibility Study – Former Imperial Laundry**  
**City of Fresno, PARCS Department Property**  
**2165 South Elm Avenue, Fresno, CA 93706**

## **SCOPE OF WORK**

Kleinfelder has developed this revised proposed scope of work for an additional investigation and feasibility study for the Former Imperial Laundry in Fresno, California (Site) (Figure 1). The work is for the City of Fresno (Client). The Site layout and investigation locations are shown on Figure 2.

The purpose of activities described below is to further evaluate the extent of soil and soil vapor impact from Stoddard solvent, and potential associated excess health risks, to the east of the former Imperial Laundry location (off Site) south of the Community Center. A Work Plan has been prepared describing these activities and also included a description of a Feasibility Study to evaluate potential alternatives to evaluate assessment results and address known impacts to the subsurface. This scope of work includes a summary of proposed tasks, cost estimates, and assumptions.

The proposed scope of work consists of the following tasks:

- Task 1 – Pre-Field Activities
- Task 2 – Field Activities
- Task 3 – Adjacent Valley Gas Soil Vapor Extraction System (SVES) Impacts Study to Maxie L. Parks Community Center
- Task 4 – Investigation-Derived Waste Characterization
- Task 5 – Preparation and Submittal of an Investigation Report
- Task 6 – Preparation and Submittal of a Feasibility Study
- Task 7 – Respond to RWQCB Comments to Investigation Report and FS

### **1 TASK 1 – PRE-FIELD ACTIVITIES**

Kleinfelder will perform the following tasks before conducting the on-Site investigation:

- Prepare a Health and Safety Plan to identify key project personnel, potential Site health and safety concerns, and designate appropriate personalized protective equipment (PPE) levels;
- Obtain appropriate City of Fresno Well/Boring permits and encroachment permits and pay associated fees;
- Mark proposed sample locations in white chalk or paint and obtain Underground Services Alert (USA) clearance for public utilities;
- Coordinate a private utility locating contractor to conduct a utility survey of proposed sample locations and conduct a geophysical survey to evaluate the location and depth of

subsurface utilities, abandoned sewer lines, or other subsurface improvements on the Site and in the alley to the east of the Former Imperial Laundry; and,

- Coordinate with appropriate subcontractors.

*Please note: The Client should be aware that penetrating the Site's surface is inherently risky. It is impossible to determine with certainty the precise location of all structures, which may be buried in the ground. Kleinfelder's fee is not adequate to compensate for both the performance of the services and the assumption of risk of damage to such structures. USA at 811 provides a partial location service free of charge for major utility lines (that are outside of private property). Kleinfelder and our drilling subcontractor will make contact with USA to mark utilities. This proposal also includes the use of a utility survey subcontractor to further assess the area for potential subsurface structures. We will also hand auger borings to either 5 feet below ground surface (bgs) or refusal for additional clearance.*

Pre-field and field activities will be conducted under the direction of a California Professional Geologist (PG).

## 2 TASK 2 – FIELD ACTIVITIES

The following field activities include advancement of borings, vapor probe installation, and soil gas sampling at locations shown on Figure 2.

### 2.1 CPT/HPT/ MIP INVESTIGATION

Kleinfelder proposes the following drilling program for further investigation of soil in the areas identified on Figure 2. The purpose of this investigation is to gather high-quality subsurface information for Site profiling, including soil classification and hydraulic conductivity, and to further evaluate the extent of chemical impacts in soil and soil gas.

CPT/HPT/MIP Borings: To further assess the extent and distribution of chemicals to soils, a California licensed C-57 driller will be contracted to advance four borings to approximately 40 feet below ground surface (bgs) to better assess the area of impact east of the former dry cleaner. These borings will have combined tooling for cone penetrometer testing (CPT), a hydraulic profiling tool (HPT) and a membrane interface probe (MIP). The proposed drilling locations are shown on Figure 2. The hard surface at boring locations will be cored, and hand augered to five feet bgs to screen for utilities.

The CPT provides a near-continuous log of the Site stratigraphy. The CPT provides detailed hydrogeologic information about the subsurface soils. This will assist in evaluating if preferential flow paths for contaminant migration exists in the natural formation.

The HPT is a logging tool that measures the pressure required to inject water into the soil as the probe is advanced into the subsurface, which is an indicator of formation permeability. It can also be used to predict the permeability in the vadose zone. Permeability in the vadose zone can affect how contaminants migrate after release, and how soil vapors may migrate in the vadose zone.

The MIP is a screening tool that semi-quantitatively identifies the presence volatile organic compounds (VOCs) in the subsurface at a near-continuous rate. The MIP works by heating a small membrane on the side of the down-hole probe to 120°C (degrees Celsius). The heated membrane causes VOCs in the soil to mobilize and cross through the membrane due to diffusion.

The carrier gas passing through the inside of the membrane picks up the VOCs and sweeps them to the surface to be detected by three different sensors.

This data can be used for both evaluation of Site conditions and future remedial planning.

## 2.2 SOIL GAS

Kleinfelder proposes the following soil gas probe installation and sampling in the areas identified on Figure 2. The purpose of this investigation is to further evaluate the extent of soil vapor impacts.

**Active Soil Gas Survey:** Three dual-nested permanent soil gas probes will be installed to evaluate soil vapor for impacts off Site. For this study, the two-depth probes are proposed to be installed at 1) 5.5 feet bgs or just above the hard pan layer, and 2) below the hard pan layer at 15 feet at three locations in the alleyway. Soil gas probe installation, purging, and sampling will be conducted in general accordance with California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) guidelines.

Sampling equipment and canisters will be provided by the analytical laboratory and inspected by Kleinfelder for proper pressurization prior to sampling. The equipment will include 1-liter (L) SUMMA® canisters (for United States Environmental Protection Agency [US EPA] Method TO-15 analysis), sample manifolds, and tubing.

**Probe Installation:** Soil gas probes will consist of a new stainless-steel screened tip attached to new ¼-inch Teflon® tubing. The probe will be lowered inside the borehole, and then sand will be placed in the annulus between the probe and the borehole sidewalls. The aboveground end of the tubing will be fitted with a brass ball valve. The sand interval will be approximately 1-foot thick, such that approximately 0.5 foot of sand will be above the probe tip. Above the sand filter pack, approximately 0.5 foot of dry bentonite crumbles will be placed. This construction will apply to both probes. The remaining annulus between and above will be filled with bentonite slurry, the uppermost portion to ground surface. To reduce the potential for cross-contamination, the probe rods will be decontaminated prior to advancing each new boring. Following installation, the surface of the probe installation will be completed with a vault box since the probes will be installed in the adjacent alleyway. The actual depth of the probe installation will be determined based on-site lithology.

**Pre-sampling Purging and Leak Checking:** Prior to sampling, the void space inside of the tubing and pore/void space of the sand pack around the probe will be purged of a minimum of three volumes of air to remove ambient air that may have been introduced during probe construction. In accordance with DTSC guidance documents, sampling will not be performed for at least five days following a rain event of at least ½-inch in a 24-hour time period.

Surface seal and fittings will be checked for ambient air leakage using the following method. A sampling shroud consisting of an extra-large plastic bag will be placed over the top of the surface seal, canisters, and manifold. The shroud will be used to contain an atmosphere of helium gas (the chosen tracer compound) during leak checking and sampling. The helium-infused shroud will be placed over the canisters and manifold during sampling.

Both leak testing and a vacuum test of the manifold fittings (a.k.a., shut-in test) will be conducted prior to purging and sampling.

Purging will be performed using a 6-liter SUMMA® canister or air pump connected to the soil gas manifold, at rate of 100 to 200 milliliters per minute (ml/min). The surface seal leak check is conducted (during purging) by placing the shroud over the seal and filling the shroud with helium.

**Sample Collection:** Following purging, the valve will be opened on each 1-liter SUMMA® canister and the sample collected in the SUMMA® canister. Following sampling, the SUMMA® canisters will be labeled and returned to their original packaging. The initial and final canister vacuum will be recorded on the labels. The temporary soil gas probes will be left in place until sample results are received and for potential re-sampling is evaluated.

The soil gas samples will be transported using chain-of-custody protocols to Eurofins AirToxics in Folsom, California for analysis (or an equivalent laboratory). The samples will be analyzed on a standard laboratory turnaround schedule, requiring approximately 10 working days for receipt of results. If helium is detected in the samples above 5% of the amount of helium recorded under the shroud during sample collection, the specific sample analytical results will be invalidated due to a potential leak in the sampling apparatus, and the probe will be resampled.

## 2.3 LABORATORY ANALYSES

Samples will be analyzed for the constituents listed below using the indicated test methods for soil gas.

Active Soil Gas (Eurofins AirToxics)

- Soil Gas - Full Scan VOCs by gas chromatography (GC) and mass selective detection (MS), (gas samples) by US EPA Method TO-15
- Helium (tracer compound) by ASTM International Method D-1946

## 3 TASK 3 – ADJACENT VALLEY GAS SOIL VAPOR EXTRACTION SYSTEM IMPACTS STUDY TO MAXIE L. PARKS COMMUNITY CENTER

The adjacent Valley Gas soil vapor extraction system (SVES) may be influencing the potential for vapor intrusion into indoor air within the Maxie L. Parks Community Center (Community Center). The SVES may be pulling subsurface soil vapor impacts away from the Community Center building, but when the SVES is turned off after remediation activities on the Valley Gas site are completed, soil vapor impacted with VOCs may begin to intrude into the Community Center building.

To measure the radius of influence effected by the SVES, four shallow vapor monitoring wells will be installed radially away from the Community Center. Three temporary 1-inch diameter vapor wells will be installed to five-feet bgs or just above the hard pan layer; and one temporary 1-inch diameter well will be installed to 15 ft bgs, below the hard pan layer. A one-foot 0.02-inch slotted section of pipe will be installed at the bottom of each well to facilitate the installation of pressure transducers to evaluate induced vacuum by the SVES. Pressure transducers and data loggers will be installed within these wells for a period of one month to measure the vacuum applied to the subsurface near the Community Center building.

#### **4 TASK 4 – INVESTIGATION-DERIVED WASTE CHARACTERIZATION**

The subsurface exploration and sampling processes described above will generate investigation derived waste (IDW) in the form of soil cuttings and equipment rinse water. The IDW will be retained in drums and stored in an area that is designated by the Client. IDW will be left on Site pending disposal at an appropriate licensed facility by the Client. Samples of the IDW will be collected for laboratory analysis (total petroleum hydrocarbons in the gasoline, diesel and oil ranges, VOCs, and California Code of Regulations Title 22 Metals). Kleinfelder will review the analytical data and discuss with the Client appropriate disposal options for the IDW.

#### **5 TASK 5 – PREPARATION AND SUBMITTAL OF AN INVESTIGATION REPORT**

The information accumulated during the investigation activities described above will be presented in a report to the RWQCB. The report will include observations and data collected during the investigation, relevant figures, tables, and appendices, and conclusions and recommendations for future work, if needed. The investigation report will be prepared under the direction of a Professional Geologist licensed in the State of California.

#### **6 TASK 6 – PREPARATION AND SUBMITTAL OF A FEASIBILITY STUDY**

A Feasibility Study (FS) will be prepared evaluating potential alternatives to address subsurface impacts observed during previous assessment activities at the Site, and the assessment activities described in Tasks 2 through 6. The FS will include:

1. Site background information
2. A description of the lateral and vertical extent of impacts in the subsurface
3. Summary of risk evaluations
4. Development of remedial action objectives (RAOs) and remedial goals (RGs)
5. An evaluation of applicable or relevant and appropriate requirements
6. Detailed development of potential remedial alternatives
7. Comparison of potential remedial alternatives
8. Recommendations
9. References
10. Figures, tables, and appendices

The FS will evaluate up to five potential alternatives, including:

1. No Action
2. Land Use Controls and Soil Management Plan
3. Long-reach Excavation, Off-Site Disposal, Backfilling, and Compaction
4. Large-diameter Augering, Off-Site Disposal, and Backfilling
5. Soil Vapor Extraction



The No Action alternative is a baseline alternative to which active alternatives will be compared. Each alternative will be described in detail, then evaluated according to effectiveness, technical implementability, and costs. After individual alternatives are evaluated, a comparative analysis will be conducted to compare the relative benefits or drawbacks of alternatives, and an overall ranking of the alternatives. The preferred alternative will be presented in the FS.

## **7 TASK 7 – RESPOND TO RWQCB COMMENTS TO INVESTIGATION REPORT AND FEASIBILITY STUDY**

Kleinfelder will respond to and incorporate one round of comments from the RWQCB to both the Investigation Report and Feasibility Study. The responses and incorporation of comments into the updated versions of these deliverables will be forwarded to the Client for review. Final versions of these deliverables will be submitted to the RWQCB for approval.

### **FEE ESTIMATE**

Based on the level of effort and scope of work described herein, Kleinfelder has developed a budget estimate. The budget estimate is summarized below.

<b>Table of Estimated Fees</b>		
<b>Task</b>	<b>Description</b>	<b>Fee</b>
1	Pre-Field Activities Labor	\$5,900
1	Pre-Field Activities Subcontractors and Fees	\$8,000
2	Field Activities Labor and Expenses	\$14,700
2	Field Activities Subcontractors	\$36,300
3	Adjacent Valley Gas SVE System Impacts Study to Maxie L. Parks Community Center	\$7,300
4	Investigation Derived Waste Characterization and Disposal	\$6,200
5	Preparation and Submittal of an Investigation Report	\$12,400
6	Preparation and Submittal of a Feasibility Study	\$16,000
7	Respond to RWQCB Comments to Investigation Report and FS	\$10,000
<b>Estimated Fees</b>		<b>\$116,800</b>
<b>20% Contingency</b>		<b>\$23,360</b>
<b>Total Estimated Fees Including Contingency</b>		<b>\$140,160</b>

### **SCHEDULE**

Preparation of the Work Plan will begin upon authorization from the Client and is expected to be submitted to the Client within four (4) weeks from authorization. Pre-field activities will commence upon approval of the Work Plan by the RWQCB, and field activities are anticipated to begin within four (4) weeks of Work Plan approval by the RWQCB, dependent upon the availability of a driller. An investigation report will be provided to the Client within four (4) weeks of retrieving transducers from vapor monitoring wells. The Feasibility Study will be provided to the Client within six weeks of the RWQCB approving the Investigation Report.

## **ASSUMPTIONS AND CLIENT RESPONSIBILITIES**

Kleinfelder used the following assumptions below in order to develop the scope of work and estimate of fees. It is possible other unforeseen conditions or situations may arise that could impact this cost estimate. Such conditions and responses would be discussed with you and authorized prior to Kleinfelder expending the additional funds.

- The Client will provide or arrange right-of-entry and unrestricted access to the Site.
- Sample locations will be made accessible for concrete coring and drilling as described above.
- Unanticipated conditions that may be present (i.e., inability to clear or core through concrete) or that would require additional study, assessment or remediation will be provided at additional costs upon approval.
- Costs for resampling of the vapor probe are not included, should helium be detected by the laboratory.
- Estimated labor hours for field work include the following: Three days of pre-field activities to mark and clear boring locations, and prepare boring permits; three days of CPT/HPT/MIP activities; three days to install temporary vapor wells to facilitate monitoring of vacuum induced by the Valley Gas SVES; two days to install and retrieve transducers from temporary vapor wells for vacuum monitoring; one day of sampling soil gas; and one day of IDW disposal coordination.

Kleinfelder is committed to providing quality service to our clients, commensurate with their wants, needs and desired level of risk. If a portion of this proposal does not meet your needs, or if those needs have changed, we will consider appropriate modifications, subject to the standards of care to which we adhere as professionals. Modifications such as changes in scope, methodology, scheduling, and contract terms may result in changes to the risks assumed by you, as well as adjustments to our fees.

## **LIMITATIONS**

Our work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions, and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

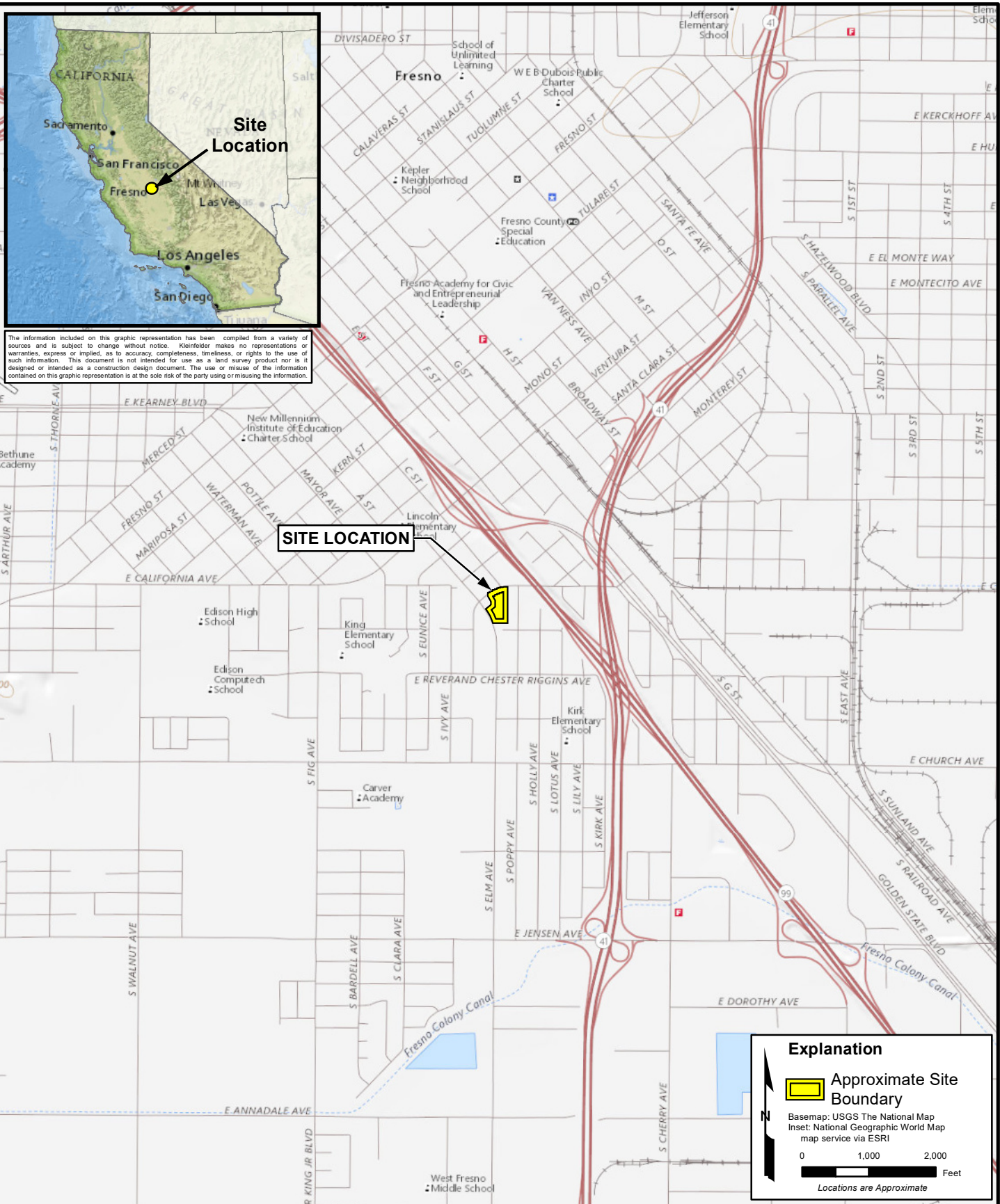
This proposal is valid for a period of 45 days from the date of this proposal. This proposal was prepared specifically for the Client and its designated representatives and may not be provided to others without Kleinfelder's express permission.

## **Attachments:**

Figure 1 – Site Location Map

Figure 2 – Proposed Locations of Soil Vapor Probes and CPT/HPT/MIP Borings





PROJECT: MWFRESNO
DRAWN: OCT 2019
DRAWN BY: KFH
CHECKED BY: WS
FILE NAME: Figure1.mxd

<b>SITE LOCATION MAP</b>
FORMER IMPERIAL LAUNDRY CITY OF FRESNO, PARCS DEPARTMENT PROPERTY 2165 SOUTH ELM STREET FRESNO, CA 93706

FIGURE
<b>1</b>



